

WHAT IS CLAIMED:

1. A method of inhibiting tumor growth in an animal, comprising:
  - selecting an animal in need of treatment for a tumor;
  - providing a monoclonal antibody comprising a heavy chain amino acid,
  - 5 wherein said antibody has an amino acid sequence selected from the group consisting of SEQ ID NOs: 1, 5, 9, 13, 17, 21, 25, 29, 33 and 37, and wherein said monoclonal antibody binds MUC18; and
  - contacting said tumor with an effective amount of said antibody, wherein said contacting results in inhibited proliferation of said cells.
- 10 2. The method of claim 1, wherein said antibody is a fully human antibody.
3. The method of claim 1, wherein said antibody further comprises a light chain amino acid having an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 6, 10, 14, 18, 22, 26, 30, 34 and 38.
4. The method of claim 1, wherein said antibody is conjugated to a therapeutic
- 15 or cytotoxic agent.
5. The method of claim 4, wherein the cytotoxic agent is ricin.
6. The method of claim 4, wherein the further therapeutic agent is a radioisotope.
7. The method of claim 1, wherein said tumor is melanoma.
- 20 8. The method of claim 1, wherein said tumor is a lung tumor
9. The method of claim 1, wherein said tumor growth is tumor metastasis.
10. A method of inhibiting cell invasion associated with melanoma, comprising:
  - selecting an animal in need of treatment for melanoma;
  - providing a monoclonal antibody comprising a heavy chain amino acid,
  - 25 wherein said antibody has an amino acid sequence selected from the group consisting of SEQ ID NOs: 1, 5, 9, 13, 17, 21, 25, 29, 33 and 37, and wherein said monoclonal antibody binds MUC18; and
  - contacting said melanoma with an effective amount of said antibody, wherein said contacting results in inhibited cell invasion.
- 30 11. The method of claim 10, wherein said antibody is a fully human antibody.

12. The method of claim 10, wherein said antibody is conjugated to a therapeutic or cytotoxic agent.

13. The method of claim 12, wherein the cytotoxic agent is ricin.

14. The method of claim 12, wherein the further therapeutic agent is a radioisotope.

15. A method of increasing survival of an animal having a metastatic tumor, comprising:

selecting an animal in need of treatment for a metastatic tumor;

providing a monoclonal antibody comprising a heavy chain amino acid, wherein said antibody has an amino acid sequence selected from the group consisting of SEQ ID NOs: 1, 5, 9, 13, 17, 21, 25, 29, 33 and 37, and wherein said monoclonal antibody binds MUC18; and

contacting said animal with an effective amount of said antibody, wherein said contacting results in inhibited metastasis of said tumor resulting in increased survival of said animal.

16. The method of claim 15, wherein said antibody is a fully human antibody.

17. The method of claim 15, wherein said antibody is conjugated to a therapeutic or cytotoxic agent.

18. The method of claim 17, wherein the cytotoxic agent is ricin.

19. The method of claim 17, wherein the further therapeutic agent is a radioisotope.